

## Inequalities/ Equations Unit Test Review

Name: \_\_\_\_\_

1.) 
$$\frac{x}{3} - 4 = \frac{x}{9} + 2$$

2.) 
$$\frac{5}{8}x - 6 = \frac{1}{4}x + 3$$

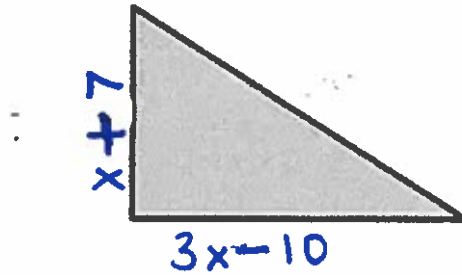
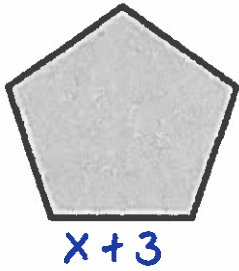
3.) Homework

4.) 
$$2(x-4) = 7x + 10 - 3x$$

5.) 
$$2x + 3x - 6 = 2(x+3)$$

6.) Homework

7.) The perimeter of these figures is equal. What is the perimeter?



8.) Kenna and Gracie each opened a checking account on the same day. Kenna opened her account with \$680 and deposited \$50 per week from her babysitting earnings. Gracie opened her account with \$950 and deposited \$20 per week from her allowance. Model and solve an equation that can be used to find the number of weeks it will take for their account balances to be equal.

- A)  $50x + 680 = 20x + 950$ , 9 weeks
- B)  $50x + 950 = 20x + 680$ , 9 weeks
- C)  $50x + 20x = 680 + 950$ , 23 weeks
- D)  $x(50 + 680) = x(20 + 950)$ , 23 weeks

Solve

9.) A sales associate at a computer electronics store is given a choice of two different salary plans. One plan pays a weekly salary of \$180 with a commission of \$30 for every computer sold. The other plan pays no salary but offers \$75 commission on each computer sold. How many computers must the sales associate sell to make the same amount of money under both plans?

Homework  
- write equation  
- solve

Fill in the blanks with the correct inequality symbol.

<p>10.) You received a \$30 bonus plus \$5 per hour. You need to make at least \$100.</p> <p><math>5x + 30</math> <input type="text"/> <math>100</math></p>	<p>11.) They're selling each ticket for \$2 and there is an entrance fee of \$5. You can spend no more than \$25.</p> <p><math>5 + 2x</math> <input type="text"/> <math>25</math></p>
<p>12.) Painter A charges \$20 per room and a cleaning fee of \$10. Painter B charges \$10 per room and cleaning fee of \$30. Write an inequality that shows when Painter A will be less than Painter B.</p> <p><math>20x + 10</math> <input type="text"/> <math>10x + 30</math></p>	<p>13.) You have \$50 that you can spend at the mall. If jeans cost \$15 each and you want a jacket that costs \$20. You can't spend more than \$50.</p> <p><math>15x + 20</math> <input type="text"/> <math>50</math></p>

14.) Use the data in the table below.

	Current Weight	Weight Loss Goal
Alan	205 pounds	1.5 lb per week
Steve	190 pounds	0.5 lb per week

Which inequality shows when Alan will weigh less than Steve? Use  $x$  for the number of weeks.

- A)  $205 + 1.5x < 190 + 0.5x$
- B)  $205 - 1.5x < 190 - 0.5x$
- C)  $205 + 1.5x > 190 + 0.5x$
- D)  $205 - 1.5x > 190 - 0.5x$

15.) Veronica is ordering trophies for her school. Company P charges \$3.50 for each trophy and a one-time engraving fee of \$25. Company R charges \$7.50 for each trophy and a one-time engraving fee of \$17. Which inequality can be used to find  $x$ , the minimum number of trophies that can be ordered so that the total charge at Company P is less than the total charge at Company R? *Homework*

- F  $3.5 + 25x < 7.5 + 17x$
- G  $3.5 + 25x > 7.5 + 17x$
- H  $3.5x + 25 < 7.5x + 17$
- J  $3.5x + 25 > 7.5x + 17$

If you're done . . .

Not homework

### Distribute & Combine Like Terms Maze #2

Name: \_\_\_\_\_

Directions: ~~Solve~~ <sup>Simplify</sup> each problem below. Use the answer of each problem to travel through the maze from "Start" to "Finish".

1. $-(7b - 9) - 4(b - 3)$ $-7b + 9 - 4b + 12$ $-11b + 21$	2. $10(1 - 9b) - (-6b - 9)$	3. $4(1 - n) - 7(9n - 6)$	4. $7(x - 4) + 9(-10 + 10x)$
5. $4(1 + 4a) + 6(-a - 8)$	6. $10(9 - 4k) - 5(-3k + 9)$	7. $-6(a - 7) - 5(1 - 2a)$	8. $9(9 + 5b) + 5(b - 8)$
9. $2(1 - 5a) - 5(1 + 10a)$	10. $-9(8x - 8) - 2(3x - 4)$	11. $-10(r - 10) - 2(-6 - 8r)$	12. $-7(1 + 6k) + 7(k - 2)$
13. $8(8x + 10) + 2(1 + 7x)$	14. $-6(3x + 2) + 6(-9 + 8x)$	15. $-10(7x + 5) - 2(-8 + 3x)$	16. $-2(-9 + 10x) - 9(-4x + 4)$
17. $-3(4n - 8) + 3(-6 + 4n)$	18. $6(10n - 6) - 8(6n - 10)$	19. $-6(n + 9) - 5(9n + 2)$	20. $-9(5 + x) - 2(2x + 5)$